

## Special insert--An open letter to Ben Santer

25 July 1996

Dr. Benjamin D. Santer  
PCMDI, Lawrence Livermore National Laboratory  
P.O. Box 808, Mail Stop L-264  
Livermore, CA 94550

Dear Ben:

On behalf of the Executive Committee of the American Meteorological Society and the Trustees of the University Corporation for Atmospheric Research (UCAR), we take this opportunity to support you and the other scientists who have participated in the preparation of the recent IPCC report, *Climate Change 1995: The Science of Climate Change*. We are aware of the tremendous effort you and other climate scientists from many countries around the world have put into this document, and the thought, care and objectivity which have characterized the process throughout.

We believe that attacks on the IPCC process in general, and you in particular, such as occurred in the editorial-page piece in *The Wall Street Journal* by Frederick Seitz (Attachment 1), have no place in the scientific debate about issues related to global change. Dr. Seitz is a prominent scientist, but his expertise is not atmospheric sciences and he was not involved in the IPCC process. *The Wall Street Journal* essay is especially disturbing because it steps over the boundary from disagreeing with the science to attacking the honesty and integrity of a particular scientist, namely yourself.

There appears to be a concerted and systematic effort by some individuals to undermine and discredit the scientific process that has led many scientists working on understanding climate to conclude that there is a very real possibility that humans are modifying Earth's climate on a global scale. Rather than carrying out a legitimate scientific debate through the peer-reviewed literature, they are waging in the public media a vocal campaign against scientific results with which they disagree.

We believe that it is important to separate two issues. The first one is the scientific question of how and why climate changes. The second question is, if the climate is changing and humans are causing part of this change, then what should societies do about it. The appropriate arena for debating the first, scientific question is through peer-reviewed scientific publications--not the media. However, the appropriate arenas for debating the second question of public policy are the media and political fora, because answering the second question is inherently a public and political process. And it is the responsibility of the scientific community to participate in the public and policy processes as well as in the scientific process.

The recent exchange in *The Wall Street Journal* is an example of why attempting to carry out a scientific debate in the media is inappropriate. In response to the Seitz opinion piece, you and 40 other scientists prepared a careful, thoughtful response, which is reprinted in its entirety below (Attachment 2). This letter was printed in *The Wall Street Journal* with minor changes, but without the names of the 40 distinguished scientists who supported your rebuttal, including the other three lead co-authors of Chapter 8.

More significantly, a letter supporting you (Attachment 3) from Dr. Bert Bolin, Chairman of the IPCC, and Co-chairs of IPCC Working Group I Drs. John Houghton from the United Kingdom and Luiz Gylvan Meira Filho from Brazil which strongly supported your letter was edited so severely that less than half of the original letter was published. Eliminated from the original version was the crucial part explaining the IPCC review process (which was the stated basis for the Seitz attack) and the key, reviewed and agreed-upon conclusion "*our ability to quantify the human influence on global climate is currently limited....nevertheless, the balance of evidence suggests that there is a discernible human influence on global climate.*"

This example illustrates why essays based upon opinion and other communications in the media or other forms of popular public debate are inappropriate mechanisms for legitimate *scientific* debate. Letters and opinion pieces can be written by any individual, and one opinion piece can carry as much or more weight in the public's mind as a letter signed by 40 scientists who have passed scientific muster over many years by publishing on the topic in the peer-reviewed literature. By necessity, letters and opinion pieces in the public media must be short, simple and non-technical, and supporting scientific data or theories cannot be provided. Contributions to the public media are not reviewed by scientific experts and can make assertions and statements that are totally without scientific foundation. And finally, key parts may be edited or removed altogether, leading to the possibility that serious changes to the meaning of the contribution may be introduced.

The larger debate related to what actions should be taken by the nation and the world in response to global change will take place in the public and political fora; and it is our responsibility as scientists to take an appropriate role in that larger debate, as you and others have done. What is important scientific information and how it is interpreted in the policy debates is an important part of our jobs. We appreciate your efforts in this respect as well. That is, after all, the very reason for the mix of science and policy in the IPCC.

In summary, we restate our strong support for the integrity and openness of the IPCC process and for you and the many other scientists of diverse views who have participated objectively and in good faith in providing this valuable assessment of the state of our knowledge about climate change.

Sincerely,

Dr. Susan K. Avery  
Chairwoman  
UCAR Board of Trustees

Dr. Paul D. Try  
President  
American Meteorological Society

Dr. Richard A. Anthes  
President  
University Corporation for Atmospheric Research

Dr. Richard E. Hallgren  
Executive Director  
American Meteorological Society

cc: Dr. Frederick Seitz

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## ATTACHMENT 1

***The Wall Street Journal* does not permit the electronic publication of its articles and letters. The interested reader may obtain hard copies of the 12 June 1996 editorial piece from Frederick Seitz from the Summer 1996 issue of the *UCAR Quarterly*, the September 1996 issue of the *Bulletin of the American Meteorological Society*, or from copies of the Wall Street Journal itself.**

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## ATTACHMENT 2

Original letter sent to The Wall Street Journal by B. Santer and 40 other scientists. Deletions and additions made by the Journal editor prior to publication on 25 June 1996 are indicated by **red** and **green**, respectively.<sup>1</sup>

Frederick Seitz's ~~op-ed-of~~ June 12 **editorial-page piece**, "A Major Deception on 'Global Warming'" wrongly accuses both the Intergovernmental Panel on Climate Change (IPCC) and a member of the climate science community of violation of procedure and deception. Not only does he thereby demonstrate ignorance of both the topic and the IPCC process, but his actions reflect an apparent attempt to divert attention away from the scientific evidence of a human effect on global climate by attacking the scientists concerned with investigating that issue.

Dr. Seitz discusses editorial changes made to Chapter 8 of the 1995 IPCC report on the science of climate change. The chapter **in-question** evaluates the scientific evidence from many studies that have attempted to detect "unusual" change in the **E**arth's climate, and determine whether some portion of that change is due to human activities. Dr. Seitz claims that the alterations made

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<sup>1</sup> Note from Ben Santer: In the original "Open Letter to Ben Santer", deletions made by the Wall Street Journal editors were color coded red. I have added "strikethrough" to make it a little easier to see where deletions occurred.

to Chapter 8, after a November 1995 IPCC meeting held in Madrid, were in violation of IPCC rules of procedure, and that their effect is to "deceive policy makers and the public into believing that the scientific evidence shows human activities are causing global warming." Similar claims of procedural improprieties have been made by the Global Climate Coalition (GCC), a consortium of industry interests. These claims conjure visions of sinister conspiracies that are entirely unfounded.

All IPCC procedural rules were followed in producing the final, now published, version of the Chapter 8. The changes made after the Madrid IPCC meeting in November 1995 were in response to written review comments received in October and November 1995 from governments, individual scientists, and non-governmental organizations. ~~They were also in response to comments made by governments and non-governmental organizations~~ during plenary sessions of the Madrid meeting. IPCC procedures required changes in response to these comments, in order to produce the best-possible and most clearly explained assessment of the science.

There has been no dishonesty, no corruption of the peer-review process and no bias--political, environmental or otherwise. Mr. Seitz claims that the scientific content of Chapter 8 was altered by the changes made to it after the Madrid IPCC meeting. This is incorrect. The present version of Chapter 8, in its Executive Summary, draws precisely the same "bottom-line" conclusion as the original Oct. 9th version of the chapter--"Taken together, these results point towards a human influence on climate." A statement conveying the same message was endorsed unanimously by the governments of the 96 IPCC countries represented at the Madrid meeting.

The pre- and post-Madrid versions of the chapter are equally cautious in their statements. Uncertainties have not been suppressed. Roughly 20% of Chapter 8 is devoted to the discussion of uncertainties in estimates of natural climate variability and the expected "signal" due to human activities.

The deletions quoted by Seitz relate to the difficulties involved in attributing climate change to the specific cause of human activities, and to uncertainties in estimates of natural climate variability. These issues are dealt with at great length in the published chapter. The basic content of these particular sentences has not been deleted.

Dr. Seitz is not a climate scientist. He was not involved in the process of putting together the 1995 IPCC report on the science of climate change. He did not attend the Madrid IPCC meeting on which he reports. He was not privy to the hundreds of review comments received by Chapter 8 Lead Authors. Most seriously, before writing his editorial, he did not contact any of the Lead Authors of Chapter 8 in order to obtain information as to how or why changes were made to Chapter 8 after Madrid. ~~He also did not contact either Prof. Bert Bolin, the Chairman of the IPCC, or those in charge of the report, the Co-Chairmen of IPCC Working Group I, Sir John Houghton and Dr. L.G. Meira Filho, in order to determine whether IPCC rules of procedure had been violated by the changes made to Chapter 8.~~

~~Scientists examine all items of evidence before drawing conclusions. They generally avoid making pronouncements outside their own areas of expertise. Seitz has failed on both counts, and~~

~~his conclusions are incorrect.~~ We urge readers of The Wall Street Journal to read the IPCC report ("Climate Change 1995: The Science of Climate Change," Cambridge University Press, 1996). They will see for themselves that, as ~~stated in and~~ required by ~~and stated in~~ IPCC procedural rules, the detection chapter is a "comprehensive, objective and balanced" review of the science.

BENJAMIN D. SANTER  
Convening Lead Author, Chapter 8  
Lawrence Livermore National Laboratory

~~Ben Santer (Convening Lead Author, Chapter 8), Lawrence Livermore National Laboratory, U.S.A.; Tom Wigley (Lead Author, Chapter 8), National Center for Atmospheric Research, U.S.A.; Tim Barnett (Lead Author, Chapter 8), Scripps Institution of Oceanography, U.S.A.; Ebby Anyamba (Lead Author, Chapter 8), Goddard Space Flight Center, U.S.A.; Kevin Trenberth (Convening Lead Author, Chapter 1) and Jerry Meehl (Lead Author, Chapter 6), both at National Center for Atmospheric Research, U.S.A.; Alan Robock (Contributor, Chapter 8), University of Maryland, U.S.A.; Ron Stouffer (Lead Author, Chapter 6) and V. Ramaswamy (Lead Author, Chapter 2), both at Geophysical Fluid Dynamics Laboratory, U.S.A.; Michael Prather (Convening Lead Author, Chapter 2), University of California Irvine, U.S.A.; Robert Dickinson (Convening Lead Author, Chapter 4), University of Arizona, U.S.A.; Mike MacCracken (Contributor, Chapter 8), Director, Office of U.S. Global Change Research Program, U.S.A.; Don Wuebbles (Lead Author, Chapter 2), University of Illinois, U.S.A.; Tom Karl (Lead Author, Chapter 3), National Climatic Data Center, U.S.A.; Karl Taylor (Contributor, Chapter 8), Lawrence Livermore National Laboratory, U.S.A.; Peter Bloomfield (Contributor, Chapter 8), Merrill Lynch, U.S.A.; David Randall (Lead Author, Chapter 4), Colorado State University; Andrew Weaver (Lead Author, Chapter 5), University of Victoria, Canada; Ken Denman (Convening Lead Author, Chapter 10), Institute of Ocean Sciences, Canada; Francis Zwiers (Contributor, Chapter 8); Jonathan Gregory, Tim Johns, Kathy Maskell, James Murphy, Simon Tett and Cath Senior (Contributors, Chapter 8), all at Hadley Centre, U.K.; John Mitchell (Lead Author, Chapter 6), Hadley Centre, U.K.; Phil Jones (Contributor, Chapter 8), Climatic Research Unit, U.K.; Richard Warrick (Convening Lead Author, Chapter 7), University of Waikato, New Zealand; Bryant McAvaney (Lead Author, Chapter 5), Neville Nicholls (Convening Lead Author, Chapter 3) and Scott Power (Contributor, Chapter 8), all at Bureau of Meteorology Research Centre, Australia; David Karoly (Contributor, Chapter 8), Monash University, Australia; Ian Enting (Lead Author, Chapter 2) and Paul Fraser (Lead Author, Chapter 2), both at CSIRO Division of Atmospheric Research, Australia; Arie Kattenberg (Convening Lead Author, Chapter 6), Royal Netherlands Meteorological Institute, Netherlands; Martin Heimann (Lead Author, Chapter 2) and Gabi Hegerl (Contributor, Chapter 8), Max-Planck Institute for Meteorology, Germany; Dominique Raynaud (Lead Author, Chapter 2), CNRS Laboratoire de Glaciologie, France; Jean Jouzel (Lead Author, Chapter 3), Laboratoire de Modelisation du Climat et de l'Environnement, France.~~

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**ATTACHMENT 3 (Original letter sent to The Wall Street Journal by B. Bolin, J. Houghton, and L. Meira)**

*Deletions and insertions by the Journal editor before publication on 25 June are marked as in Attachment 2.*

The Editor  
Wall Street Journal  
New York

Dear Sir,

~~Frederick Seitz's article 'A major deception on "Global Warming"' (WSJ, 12 June 1996) is completely without foundation. It makes serious allegations about the Intergovernmental Panel on Climate Change (IPCC) and about the scientists who have contributed to its work which have no basis in fact. Mr. Seitz does not state the source of his material, and we note for the record that he did not check his facts either with the IPCC officers or with any of the scientists involved.~~

~~The crucial error in Mr Seitz's article which could have been avoided if he had simply taken the time to familiarize himself with IPCC rules of procedure is his assumption that the version of the IPCC report from which he quotes was the final version approved by the scientific authors and accepted by the IPCC. This is not the case. He quotes from the draft version of October 1995, which was sent out to delegates in preparation for the November 1995 Plenary Meeting which was held in Madrid. The final version is the one which was modified in accordance with the guidance received at the Madrid meeting and which has now been published. His attack on Dr Santer and the other scientists involved is therefore completely unfounded.~~

~~In the weeks before the Madrid meeting, many additional review comments on the October draft were received. For instance, the United States government in submitting their points for review, commented on 'several inconsistencies' and stated 'it is essential that the chapters not be finalized prior to the completion of the discussions at the IPCC Plenary in Madrid, and that the chapter authors be prevailed upon to modify their text in an appropriate manner following discussion in Madrid.'~~

~~A substantial part of the Madrid meeting was devoted to scientific presentation and discussion regarding the extent to which anthropogenic climate change has been detected in climate observations. Further review comments from experts and government delegates were received and the Lead Authors were formally asked to consider modifications for improvement. The Plenary meeting finally "accepted" Chapter 8 (the chapter Mr. Seitz attacks) and the other ten chapters of the report, subject to the Lead Authors revising them in the light of the Madrid discussions. The Plenary meeting was, in fact, the final part of the very comprehensive and thorough IPCC process of peer review.~~

In accordance with IPCC Procedures, the ~~subsequent~~ changes to the draft of Chapter 8 were under the full scientific control of its convening Lead Author, ~~Dr.~~ Benjamin Santer. No one could have been more thorough and honest in undertaking that task. As the responsible officers of the IPCC, we are completely satisfied that the changes incorporated in the revised version were made with the sole purpose of producing the best possible and most clearly explained assessment of the science and were not in any way motivated by any political or other considerations.

It is, of course, easy to take isolated sentences from the earlier version ~~which~~ that have been deleted or replaced to bolster arguments or suspicions such as those presented by ~~Mr~~ Dr. Seitz. But that is to misunderstand the nature of the science with which we are dealing and the very open IPCC scientific assessment process.

~~We invite Mr Seitz and those concerned about the integrity of the science to read the chapter in the IPCC report and also the approved Summary for Policy Makers (SPM) particularly as they concern the detection issue. Both have been carefully and honestly crafted to explain our understanding of the uncertainties and to express clearly the scientific basis for the conclusions stated in the SPM (approved by all the delegates at Madrid), namely that 'our ability to quantify the human influence on global climate is currently limited nevertheless, the balance of evidence suggests that there is a discernible human influence on global climate'.~~

Bert Bolin  
Chairman, Intergovernmental Panel on Climate Change (IPCC)

John Houghton  
Co-Chairman, Working Group I, IPCC

Luiz Gylvan Meira Filho  
Co-Chairman, Working Group I, IPCC

Hadley Centre, London Road  
Bracknell, United Kingdom

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